# PERFORMANCE MEASURES FOR CRITICALITY SAFETY PROGRAMS



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U.S. DEPARTMENT OF ENERGY

#### INTRODUCTION

The DOE Policy 450.5, Line Environment, Safety and Health Oversight states:

The Department's and contractors' line organizations have the following common principles:

- a. Work together to develop ES&H performance objectives, measures, and expectations, tied to Departmental strategic goals and objectives, as well as to performance goals and objectives of the Safety Management System elements. Mutual agreement is reached on expected ES&H performance.
- b. Work together to develop contract performance measures and performance indicators that are linked to the DOE Safety Management System.
- c. Work together to develop a high level of performance assurance which results in improved ES&H performance.

These common principles are fulfilled in full recognition that DOE line management is a customer, and owner, and that the contractor is a supplier. In this regard, an effective customer and supplier relationship must be maintained. By following this philosophy, DOE line management accomplishes its self-regulatory responsibility.

DOE Policy 450.5 also requires that each field element have a designated focal point for coordinating oversight activities. For nuclear criticality safety (NCS), the DOE line management focal point is the Nuclear Criticality Safety Program Manager, NCS Subject Matter Expert or equivalent position. The information in this document was developed to assist establishment of performance measures and expectations to be used as part of line management ES&H oversight of NCS.

#### **SCOPE**

This document contains both recommended performance measures (PMs) and PMs that should be avoided to encourage a healthy NCS Program. Specific measurement criteria should be determined for each PM. These PMs are representative of those successfully implemented at several DOE sites and they should be tailored to specific site applications and utilized to assess contractor performance.

### **Examples of NCS Performance Measures**

- Contractor Management performs self-assessment of NCS program elements per ANS/ANSI-8.19.
- Close infractions in a timely manner.
- Avoid repeat infractions.
- Criticality Safety Engineer (CSE) performs one criticality safety audit per month.
- Contractor operations supervision, assisted by CSEs, audits all operational areas of the facility annually with a specific schedule for assessments of individual areas (not a single annual event but the accumulation of smaller, in depth audits).
- Encourage self-reporting minimize the number of infractions discovered by oversight (Contractor or DOE) groups.
- Minimize rework no more than 10% defects in the approved evaluations and postings for the first year; 1% thereafter.
- All CSEs formally qualified by a specified date.
- 40% of the CSEs have attended at least one technical conference in past five years.

#### **Performance Measures to Avoid**

- Encourage zero infractions reported
- Reduce length of time or cost of producing evaluations